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PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

HIEN D. MA et al.

Serial No.: 09/388,926

Filed: September 2, 1999

For: METHOD AND APPARATUS FOR
PROVIDING PREPAID MUSIC CARD FOR
DECIPHERING RECORDED BROADCAST
AUDIO SIGNALS

Appeal No. _____

Patent Art Unit: 3621

Examiner: Calvin L. Hewitt, II

REPLY TO EXAMINER'S ANSWER

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GROUP 3

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TABLE OF CONTENTS

I. Real Party in Interest	1
II. Related Appeals and Interferences.....	2
III. Status of the Claims	2
IV. Status of the Amendments.....	2
V. Summary of the Invention.....	2
VI. Issue for Review	2
VII. Grouping of the Claims	2
VIII. Argument	3
IX. Conclusion	5
APPENDIX - Copy of Claims on Appeal.....	7



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: _____

REPLY BRIEF

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GROUP 3621

Sir:

For the appeal to the Board of Patent Appeals and Interferences from the decision of December 11, 2002 finally rejecting claims 1-20 in the above-identified application, Appellant submits the following reply brief in response to the Examiner's Answer of October 24, 2003 in accordance with 37 C.F.R. § 1.193(b)(1).

I. Real Party in Interest

There is no dispute as to the real party in interest.

II. Related Appeals and Interferences

There is no dispute as to related appeals and interferences.

III. Status of the Claims

There is no dispute as to the status of the claims.

IV. Status of the Amendments

There is no dispute as to the status of the amendments after final.

V. Summary of the Invention

There is no dispute as to the summary of the invention filed with appellant's brief on appeal.

VI. Issue for Review

There is no dispute as to the issue for review in the appeal.

VII. Grouping of the Claims

Examiner appears to admit that independent claims 1, 10 and 13 do not stand or fall together. Examiner however suggests that Appellant did not provide a statement why the dependent claims are separately patentable. However, the Examiner's rejections of the respective dependent claims rely on various combinations of the prior art references cited in the Examiner's rejection under 35 U.S.C. §103(a). Appellant denies that it would have been obvious to combine the various references cited as teaching each of the elements recited in

the dependent claims. Appeal Brief, Pg. 8. Therefore Appellant denies that the dependent claims stand or fall together with their respective independent claims.

Furthermore, at a minimum, dependent claims 14, 19 and 20 relate to actions taken (or not taken) depending on whether the actual beginning of a broadcast segment can be determined. As discussed further below, the determination of an actual start time of a broadcast segment is not taught by any of the prior art references. Therefore the concept of performing a conditional act based on the actual start time being determined and located is separately patentable from the remaining claims from which each of claims 14, 19 and 20 depend.

VIII. Argument

The Examiner's Answer appears to be based on a misunderstanding of the Stepp reference, and the important differences between what Stepp teaches and what the present invention accomplishes. Without rehashing those differences in every detail, Appellant will endeavor to crystallize the essence of the differences here.

Certain aspects of what the Examiner suggests is taught by Stepp et al. are unclear at best. In particular, the time and location at which data representing the start time of a program segment is inserted into a data signal, and exactly what information that inserted data represents, are unclear from a fair reading of Stepp et al. The Examiner suggests that Stepp et al. teaches the insertion of the length of signal, start time, title, etc., and that the receiver receives the information signal and decodes the signal in order to determine the encoded information. Even if the Examiner were correct that Stepp et al. teaches a signal having auxiliary data embedded prior to being received, and Appellant disagrees with the Examiner's characterization, the reference is still deficient in that it does not suggest that the

data inserted into the signal represent the *actual* delineation between broadcast segments, as opposed to a mere “broadcast start time” or any other information not specifically tied to the *actual* change from one program segment to the next. As argued previously, any inaccuracy introduced into the identification of broadcast segment boundaries reduces the effectiveness of embodiments of the present invention. The fact the the Stepp reference is so unclear as to what information is embedded into the signal, and how it can be used, is further evidence that the system taught by Stepp et al is not operable to identify an actual beginning of a broadcast segment, as opposed to informational content such as when the segment was intended to be aired.

Furthermore, the Stepp reference only describes one embodiment of a method for buffering an information signal for later recording. That method is described at Col. 5 beginning at Line 10 of the reference, and includes determining the start time (step 213) and inserting the start time into the video signal (step 314). In other words, the only method fully described by Stepp et al includes adding start time data to the information signal *at the receiver*, which as argued previously would cause inaccuracies in the actual program segment beginning and end that are recorded.

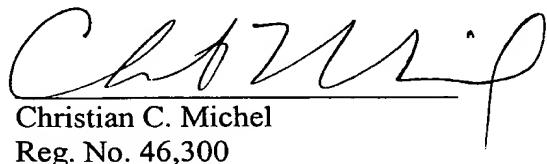
In short, the Examiner’s understanding of the Stepp reference does not appear to accurately reflect what is taught. That which is taught by Stepp does not inform one of ordinary skill in the art of the important characteristics of auxiliary data embedded in the information signal. Each of independent claims 1, 10 and 13 recites “a digital audio radio broadcast segment comprising auxiliary data *operable to identify* a beginning said broadcast segment.” Importantly, the Examiner has not cited one reference that teaches this limitation. The reference cited for this proposition by the Examiner, Stepp et al., simply does not teach this feature, and at most teaches embedding some information related to a broadcast time of

an information signal which may or may not accurately reflect the *actual delineation* between broadcast segments of the information signal. In other words, none of the embedded information referred to in Stepp and cited by the Examiner is *operable to identify* a beginning of a broadcast segment.

IX. Conclusion

For the reasons discussed above, the combination of the cited art does not disclose or suggest the claimed system and method for receiving an encrypted digital signal comprising a digital audio radio service (DARS) broadcast segment with auxiliary data operable to identify a beginning of the broadcast segment, the auxiliary data being embedded in the signal prior to the signal being received. The primary cited reference, Stepp et al. teaches receiving a signal with embedded start time data, but teaches inserting the start time data *at the receiver*, rather than receiving a signal with auxiliary data operable to identify a start of a broadcast segment already embedded. Furthermore, even if Stepp can be read to teach embedding some type of “start time” into the signal prior to receipt by the receiver, it does not suggest the accuracy required by auxiliary data *operable to identify* a beginning of a broadcast segment. Accordingly, the rejection of claims 1-20 is untenable. Reversal of the final rejection is requested.

Respectfully submitted,



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Dated: July 31, 2003

APPENDIX - Copy of Claims on Appeal

1. An apparatus for recording and playing a digital signal, comprising:
 - a receiver for receiving an encrypted digital signal comprising a digital audio radio service broadcast segment comprising auxiliary data operable to identify a beginning of said broadcast segment, said auxiliary data being embedded in said encrypted digital signal prior to said signal being received;
 - a buffer connected to said receiver for storing at least part of said digital signal as it is being received;
 - a recorder connected to said receiver for recording onto a first recording medium said encrypted digital signal in response to a user request if a beginning of said broadcast segment is in said buffer;
 - a player for playing said first recording medium and connected to a card reader; and
 - a card having a predetermined value for insertion into said card reader; wherein when said card is inserted into said card reader, said card reader verifies that said predetermined value is at least a selected minimum value and authorizes said player to decipher said encrypted digital signal from said first recording medium and to record said deciphered signal onto one of said first recording medium and a second recording medium.
2. The apparatus of claim 1, further comprising:
 - a key to decipher said encrypted digital signal, said key being stored in one of said card and a memory device in said player.
3. The apparatus of claim 2, wherein said player is a combination player and recorder, and further comprising:

a second recording medium configured to have said deciphered digital signal recorded thereon.

4. The apparatus of claim 3, wherein the first recording medium and the second recording medium are the same.
5. The apparatus of claim 1, wherein said card is a smart card having at least one of a memory device for storing monetary credits, and an integrated circuit for storing information.
6. The apparatus of claim 1, wherein said card has a memory device for storing said predetermined value, and said card reader is operable to deduct said selected minimum value from said predetermined value stored in said memory device.
7. The apparatus of claim 1, wherein said digital signal is a digital audio broadcast signal.
8. The apparatus of claim 1, wherein said card is a prepaid smart card.
9. The apparatus of claim 8, wherein monetary value can be added and subtracted from said smart card.
10. A method for recording and playing digital signals, comprising:
receiving an encrypted digital signal comprising a digital audio radio service broadcast segment comprising auxiliary data operable to identify a beginning of said

broadcast segment, said auxiliary data being embedded in said encrypted digital signal prior to said signal being received;

storing said encrypted digital signal in a buffer as it is being received;

determining whether a beginning of said broadcast segment is in said buffer in response to a user request to record said encrypted digital signal;

recording said encrypted digital signal onto a first recording medium in a recorder and player device if said beginning of said broadcast segment is stored in said buffer;

inserting a card having at least a predetermined value into said recorder and player device;

determining that said predetermined value corresponds to at least a selected minimum value; and

deciphering said encrypted digital signal and recording said deciphered signal onto one of said first recording medium and a second recording medium if said card has said selected minimum value.

11. The method of claim 10, further comprising the step of recording said deciphered signal onto at least one of said first recording medium and a second recording medium.

12. The method of claim 10, wherein said card has a memory device for storing said predetermined value, and further comprising the step of deducting said selected minimum value from said memory device.

13. A method for recording and playing an encrypted digital audio broadcast signal, comprising:

receiving an encrypted digital audio radio service broadcast signal comprising a digital audio broadcast segment comprising auxiliary data operable to identify a beginning of said broadcast segment, said auxiliary data being embedded in said encrypted digital signal prior to said signal being received;

storing at least part of said encrypted digital audio broadcast signal in a buffer as it is being received;

electing to record said encrypted digital audio broadcast signal onto a first recording medium;

determining whether said beginning of said broadcast segment is in said buffer; and recording said encrypted digital audio broadcast signal onto said first recording medium if said beginning of said broadcast segment is stored in said buffer.

14. The method as claimed in claim 13, wherein said encrypted digital audio broadcast signal is not recorded if said predetermined portion of said encrypted digital audio broadcast signal is not stored in said memory device.

15. The method of claim 13, further comprising the steps of:

inserting a card provided with a monetary amount into a card reader connected to said recorder and player;

verifying that said monetary amount corresponds to a selected minimum value; and deciphering said encrypted digital audio broadcast signal on said first recording medium if said card has said selected minimum value.

16. The method of claim 15, further comprising the step of adding a monetary amount to said card at one of a card vendor location and an automated teller machine.
17. The method of claim 15, further comprising the step of adding a monetary amount to said card over a computer network connection.
18. The method of claim 15, further comprising the step of playing said deciphered digital audio broadcast signals.
19. The apparatus of claim 6, wherein said card reader is adapted to deduct said selected minimum value from said card only if said beginning of said broadcast segment was in said buffer.
20. The method of claim 10, further comprising the step of determining whether to deduct value from said card based on whether said beginning of said broadcast segment was in said buffer.